Choose**between 1-3** of the following Challenge Questions to research on your own and answer. You can research all of the questions, but only submit answers to a max of three.

The answers are *not* in your lessons. These questions are intended to have you conduct additional research on your own to gain experience in finding answers for yourself. Don't look for answers in the lessons!

If some of your classmates have already submitted answers, try to choose a question/questions that have not already been answered. If they have all been answered, try to find additional information that has not yet been presented by your classmates.

Challenge Questions

**Question #1:**

* Aside from Math.floor and Math.random, name at least one more function/method of the Math global object, along with example code on how to use it.
  + Math.ceil(x)
    - Returns x rounded up to its nearest integer
      * Math.ceil(5.9)
        + Returns 6
  + Math.trunc(x)
    - Returns the integer part of x
      * Math.trunc(6.7)
        + Returns 6

**Question #2:**

* What happens if you try to compare a numeric string and a number, and why? For example:

'5' > 3

The numeric string in this case ‘5’ would be converted by JavaScript to a number prior to the comparison. Accurate comparison would require conversion of a string to a number prior to the comparison action. If you two numeric stings and do not first change to a number you will get a surprising result. For example if you say ‘3’ < ‘13’ the answer would be false. This is because in the comparison the ‘3’ alphabetically is before 1 and since these are both string numbers the comparison is only looking at the 1 in ‘13’.

**Question #3**

* You have learned how to use the addition assignment operator **+=** with numbers. What happens if you use it with strings? Provide a code example along with what its output would be.

**Question #4**

* You've learned about converting values to Boolean data type using the **Boolean()** function or the **!!** operator. How would you convert a value to a string in JavaScript? How would you convert a value to a number? Provide code examples. (Note: There are at *least*two ways to convert a value to a number in JavaScript. Try to give at least two answers.)

**Question #5**

* It is also possible to place **<script>**elements inside the head of an HTML page, but typically the best practice is to add them to the bottom of the body. Conduct your own research and find out what happens if you place **<script>**elements in the head, and provide a reason why this is not recommended.

**Question #6**

* There are two ways to add comments to JavaScript: block comments and line comments. Provide examples of both ways.

**Question #7**

* Research at least one array method that has not been discussed yet and present it in your answer. Explain what it does and provide sample code to demonstrate how to use it.

**Question #8**

* What is the meaning of NaN (Not a Number) in JavaScript, and how is it used?
  + NaN is a number that is not a legal number. It can be used in code to determine if a value or number is not a number.